Amendments to the Claims

1. (Canceled).

2 (Currently amended) The macromer according to claim ~~2~~6 wherein each of said cross-linkable moiety and said polymer are non-toxic.

3. (Currently amended) The macromer according to claim ~~1~~2 wherein said polymer is a polyether.

4. (Original) The macromer according to claim 3 wherein said polyether is hydrophilic.

5. (Original) The macromer according to claim 4 wherein said polyether is poly(ethylene glycol).

6. (Currently amended) A macromer comprising an oligomer consisting of a plurality of repeating units each consisting of a cross-linkable moiety bound to a polymer, wherein each of said cross-linkable moiety and said polymer are biocompatible, ~~The macromer according to claim 1~~ wherein said cross-linkable moiety has ~~comprises~~ an unsaturated carbon bond between the ends of the cross-linkable moiety, and wherein said ends have the same chemical composition.

7. (Currently amended) A macromer comprising an oligomer of a plurality of repeating units each consisting of a cross-linkable moiety bound to a polymer, wherein each of said cross-linkable moiety and said polymer are biocompatible, and ~~The macromer according to claim 6~~ wherein said cross-linkable moiety is a fumaryl group.

8. (Currently amended) The macromer according to claim ~~1~~7 modified with a therapeutic agent.

9. (Currently amended) The macromer according to claim 8 wherein said therapeutic agent comprising a biocompatible organic group selected from the group consisting of peptides, proteins, ~~protein fragments,~~ proteoglycans, glycoproteins, and carbohydrates.

10. (Original) A macromer comprising oligo(poly(ethylene glycol) fumarate).

11. (Currently amended) The macromer according to claim 9<u>10</u> modified with a biocompatible organic group selected from the group consisting of peptides, proteins, ~~protein fragments,~~ proteoglycans, glycoproteins, and carbohydrates.

12. (Original) The macromer according to claim 11 wherein the peptide is selected from the group consisting of RGD, YIGSR, REDV, IKVAV, and KRSR peptides.

13. (Original) The macromer according to claim 11 wherein the protein is selected from the group consisting of members of the transforming growth factor beta superfamily, bone morphogeneic proteins, basic fibroblast growth factor, platelet derived growth factor, insulin like growth factor, and extracellular matrix molecules including osteopontin, osteonectin, osteocalcin, and bone sialoprotein.

14. (Currently Amended) The macromer according to claim 11 wherein the ~~protein fragments~~ <u>peptides</u> comprise fragments of the proteins selected from the group consisting of members of the transforming growth factor beta superfamily, bone morphogeneic proteins, basic fibroblast growth factor, platelet derived growth factor, insulin like growth factor, and extracellular matrix molecules including osteopontin, osteonectin, osteocalcin, and bone sialoprotein, comprising 3-30 amino acids.

15. (Original) The macromer according to claim 11 wherein the carbohydrate is selected from the group consisting of starch, cellulose, and chitin.

16. (Original) A polymeric network comprising oligo(poly(ethylene glycol) fumarate).

17. (Currently amended) The macromer according to claim 16 modified with a biocompatible organic group selected from the group consisting of peptides, proteins, ~~protein fragments,~~ proteoglycans, glycoproteins, and carbohydrates.

18. (Original) The polymeric network according to claim 16 comprising oligo(poly(ethylene glycol)) cross-linked with oligo(poly(ethylene glycol) fumarate).

19. (Original) The polymeric network according to claim 16 comprising oligo(poly(ethylene glycol)) cross-linked with at least one linker molecule.

20. (Original) The polymeric network according to claim 19 wherein said linker molecule comprises a polymer comprising at least one unsaturated carbon-carbon bond.

21-22. (Canceled).

23. (Original) The polymeric network according to claim 16 wherein said polymeric network is water-swellable.

24. (Currently amended) A method of making a polymeric network comprising reacting poly(ethylene glycol) (PEG) ~~PEG~~ with a fumaryl compound in the presence of an organic base to form ~~an oligo(PEG fumarate)~~ a macromer comprising an oligomer of a plurality of repeating units each consisting of the fumaryl compound bound to PEG.

25. Canceled.

26. (Currently amended) The method according to claim ~~25~~24, further including the step of selecting ~~wherein the wet to dry swelling ratio is tunable by varying~~ the ratio of PEG to the fumaryl compound so as to produce a polymeric network having a desired wet to dry swelling ratio.

27. (Currently amended) The method according to claim ~~25~~24, further including the step of selecting ~~wherein the wet to dry swelling ratio is tunable by varying~~ the PEG molecular weight so as to produce a polymeric network having a desired wet to dry swelling ratio.

28. (Original) The method according to claim 24 further comprising cross-linking the fumaryl groups.

29. (Currently amended) A method of making an oligo(poly(ethylene glycol) fumarate) (OPF) ~~OPF~~ coupled to a therapeutic agent, comprising:

(a) providing an OPF;

(b) activating the OPF;

(c) coupling the therapeutic agent to the activated OPF~~; and~~.

30. (Currently amended) A method of making an oligo(poly(ethylene glycol) fumarate) (OPF) coupled to a therapeutic agent, comprising:

(a) providing an OPF;

(b) activating the OPF by ~~The method according to claim 29 wherein step (b) comprises~~ dissolving dried OPF and a corresponding amount of 4-nitrophenylchloroformate in triethyl amine; and

(c) coupling the therapeutic agent to the activated OPF.

31. (Currently amended) A method of making an oligo(poly(ethylene glycol) fumarate) (OPF) coupled to a therapeutic agent, comprising:

(a) providing an OPF by reacting ~~The method according to claim 29 wherein step (a) comprises forming the OPF by the reaction of~~ fumaryl chloride with poly(propylene glycol).

(b) activating the OPF; and

(c) coupling the therapeutic agent to the activated OPF.

32. (Currently amended) The method according to claim 29 wherein the therapeutic agent comprises a biocompatible organic group is selected from the group consisting of peptides, proteins, ~~protein fragments,~~ proteoglycans, glycoproteins, and carbohydrates.

33. (Currently amended) The method according to claim ~~25~~ 29 further comprising:

(d) cross-linking the OPF with an unsaturated linker molecule.

34. (Currently amended) The method according to claim 29 wherein the unsaturated linker comprises a polymer selected from the group consisting of poly(propylene fumarate) (PPF) ~~PPF~~ and PEG.